Docket No.:   285615US0PCT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: GROUP: 1612
Tomoki MORIOKA

SERIAL NO: 10/566,498   EXAMINER: HOLLOMAN, NANNETTE

FILED: January 31, 2006

FOR: HAIR GROOMING PREPARATION

DECLARATION UNDER 37 C.F.R. § 1.132

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Sir:

Now comes Dr.Takeshi Kaharu who deposes and states that:

1. I am a graduate of Osaka University and received my doctoral degree in the year 1994.

2. I have been employed by the Kao Corporation since 1994,as a researcher in the field of organic chemistry. Since 1994 I have been a researcher in the Material Science Research Laboratories and since 2004 I have been involoved in Hair Care Rsearch Lavoratories.

3. I declare to the following:

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Using the evaluation test described in paragraphs [0056] and [0057] of the specification of this application, resistance of hair samples against the signs which have remained after braiding is indicated as a recovery from signs formed by bending "just after", and "one hour after." The results are shown, for example, in Examples 9, 10, 11 and 12, and Comparative Examples 9, 10, 11 and 12 of Tables 3-5 of the specification.

As shown in Figure 1 of the original specification, model hair samples are wound/curved and have a notched shape. If the curves are completely removed, the hair would be straight and an angle θ would be 180 degrees. However, it would be difficult to completely straighten the hair, therefore, usually the angle θ of the hair becomes larger (as if a coiled spring were extended) as shown in the experimental results.

In the current application, a recovery by which the signs which have remained after braiding transform into extended hair, is defined as a recovery (%), which is expressed as:

$$recovery\ (\%) = \sin\ (\theta/2) \times 100.$$

Examples 9-12 and Comparative Examples 9-12 of Table 5 in the specification as originally filed, as well as their corresponding θ data, are shown in the Table 5 included herewith (see below).

In regard to a resistance right after the formation of the signs which have remained after braiding (recovery), in the case of Comparative Example 11 for example, a recovery of 71% means angle $\theta = 90$ and that the state of the hair is still a notched shape. In contrast, by using the product of the claimed invention such as Example 11, a recovery of 79% is attained which means that angle $\theta = 104.4$ degree. Thus, Example 11 shows a resistance against the signs which have remained after braiding and a substantial improvement of suppleness.

Furthermore, in the case of Comparative Example 11, after one hour the hair shows a recovery of 92%, i.e. $\theta = 133.9$ degree, meaning that a tendency for improvement is observed, but the degree of improvement is inadequate. In contrast, in the case of Example 11 which uses the product of the claimed invention, a recovery of 97% is observed (i.e., $\theta = 152$ degree

which is near 180 degree), meaning that, a resistance of the hair against the signs which have remained after braiding and a remarkable improvement of suppleness are provided. Accordingly, such differences (i.e., 79% versus 71% and 97% versus 92% for Example 11 versus Comparative Example 11 --- 104.4° versus 90.5° and 151.9° versus 133.9° for Example 11 versus Comparative Example 11) in the recovery from signs of bending are <u>significant</u>.

Similarly, the observed differences in the recovery from signs of bending of the remaining comparisons provided in the specification (e.g., Example 9 versus Comparative Example 9; Example 10 versus Comparative Example 10; etc.) are <u>also significant</u> as the differences of the remaining comparisons are greater than those referenced above with respect to Example 11 versus Comparative Example 11.

Moreover, not only are the above-mentioned differences in the recovery from signs of bending significant due to the increases in percent recovery and/or degree of θ, but such differences are also significant due to these increases being perceptible to the consumer as relates to the perceived suppleness of treated hair.

Table 5 (corresponding θ values are added)

Resistance against the signs which have remained after braiding	Example 9	Comparative Example 9	Example 10	Comparative Example 10	Example 11	Comparative Example 11	Example 12	Comparative Example 12
Recovery (%) from the signs which have remained after braiding (Rightly after)	77	54	83	61	79	71	79	69
θ (degrees) (Rightly after)	100.7	65.4	112.2	75.2	104.4	90.5	104.4	87.3
Recovery (%) from the signs which have remained after braiding (1 hour after)	96	81	97	87	97	92	97	90
θ (degrees) (1 hour after)	147.5	108.2	151.9	120.9	151.9	133.9	151.9	128.3

4. I declare under penalty of perjury under the laws of the United States of America

that the foregoing is believed to be true and correct. 28 U.S.C. §1746(1).

Takeshi Kaharu
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Signature

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